

THE FILE COPY

2

**GERMAN GENERAL OFFICER CASUALTIES IN
WORLD WAR II -- HARBINGER FOR U.S.
ARMY GENERAL OFFICER CASUALTIES
IN AIRLAND BATTLE?**

A Monograph

by

Major French L. MacLean

Infantry

DTIC
ELECTE
AUG 09 1983
S D D



**School of Advanced Military Studies
United States Army Command and General Staff College
Fort Leavenworth, Kansas**

First Term AY 88-89

Approved for Public Release; Distribution is Unlimited

AD-A211 610

SECURITY CLASSIFICATION OF THIS PAGE

REPORT DOCUMENTATION PAGE				Form Approved OMB No. 0704-0188	
1a. REPORT SECURITY CLASSIFICATION UNCLASSIFIED			1b. RESTRICTIVE MARKINGS		
2a. SECURITY CLASSIFICATION AUTHORITY			3. DISTRIBUTION / AVAILABILITY OF REPORT Approved for public release; distribution unlimited		
2b. DECLASSIFICATION / DOWNGRADING SCHEDULE					
4. PERFORMING ORGANIZATION REPORT NUMBER(S) School of Advanced Military Studies, USAC&GSC			5. MONITORING ORGANIZATION REPORT NUMBER(S)		
6a. NAME OF PERFORMING ORGANIZATION School of Advanced Military Studies, USAC&GSC		6b. OFFICE SYMBOL (if applicable) ATZL-SWV	7a. NAME OF MONITORING ORGANIZATION		
6c. ADDRESS (City, State, and ZIP Code) Fort Leavenworth, Kansas 66027-6900			7b. ADDRESS (City, State, and ZIP Code)		
8a. NAME OF FUNDING / SPONSORING ORGANIZATION		8b. OFFICE SYMBOL (if applicable)	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER		
8c. ADDRESS (City, State, and ZIP Code)			10. SOURCE OF FUNDING NUMBERS		
			PROGRAM ELEMENT NO.	PROJECT NO.	TASK NO.
11. TITLE (Include Security Classification) German General Officer Casualties in World War II -- Harbinger for U.S. Army General Officer Casualties in AirLand Battle? (U)					
12. PERSONAL AUTHOR(S) Major French L. MacLean, USA					
13a. TYPE OF REPORT Monograph		13b. TIME COVERED FROM _____ TO _____		14. DATE OF REPORT (Year, Month, Day) 88 12 7	
15. PAGE COUNT 53					
16. SUPPLEMENTARY NOTATION					
17. COSATI CODES			18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number) German generals Leadership doctrine Officer casualties World War II		
FIELD	GROUP	SUB-GROUP			
19. ABSTRACT (Continue on reverse if necessary and identify by block number) This monograph discusses German general officer casualties in World War II with respect to possible U.S. Army general officer losses in AirLand Battle. Such losses adversely affect both command and control and morale in large unit operations. This monograph hypothesized that factors of doctrine, personal combat experience, training, and command rotation combined with battlefield lethality to cause extremely high senior officer casualties in German World War II Blitzkrieg operations; and will cause similar losses in future U.S. AirLand Battle operations. (continued on other side of form)					
20. DISTRIBUTION / AVAILABILITY OF ABSTRACT <input checked="" type="checkbox"/> UNCLASSIFIED/UNLIMITED <input type="checkbox"/> SAME AS RPT <input type="checkbox"/> DTIC USERS			21. ABSTRACT SECURITY CLASSIFICATION UNCLASSIFIED		
22a. NAME OF RESPONSIBLE INDIVIDUAL Major French L. MacLean			22b. TELEPHONE (Include Area Code) (913) 684-2138		22c. OFFICE SYMBOL ATZL-SWV

Item 19 continued.

The monograph first examines German general officer casualties, specifically 136 German general officer division, corps, and army commanders killed in action from 1939-1945. The monograph analyzes German war fighting doctrine, World War I combat experiences for these men, general officer training courses, and command rotation flaws which combined with the high lethality of the battlefield in World War II to help produce these significant losses. Next, the factors of AirLand Battle doctrine, Vietnam combat experience for current U.S. Army generals, general officer training courses, and anticipated command rotation policies are examined for similar trends in the U.S. Army.

The monograph suggests that the factors examined for the German general officers are valid; they did contribute to the high senior officer losses the Germans experienced, and the similar factors looked at for American generals show the potential for similar losses if the U.S. must go to war. Although these anticipated losses cannot be fully eliminated, the paper suggests some means for reducing such losses.

GERMAN GENERAL OFFICER CASUALTIES IN WORLD WAR II --
HARBINGER FOR U.S. ARMY GENERAL OFFICER CASUALTIES
IN AIRLAND BATTLE?

by

Major French L. MacLean
Infantry

School of Advanced Military Studies
U.S. Army Command and General Staff College
Fort Leavenworth, Kansas

7 December 1988


Accession For	
NTIS CRA&I	<input checked="checked" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By	
Distribution /	
Availability Codes	
Dist	Avail and/or Special
A-1	

Approved for public release; distribution is unlimited

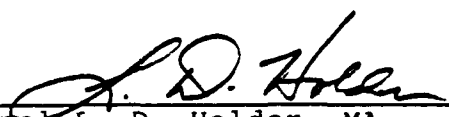
School of Advanced Military Studies
Monograph Approval

Name of Student: Major French L. MacLean.
Title of Monograph: German General Officer Casualties in World War II -- Harbinger for U.S. Army General Officer Casualties in AirLand Battle?

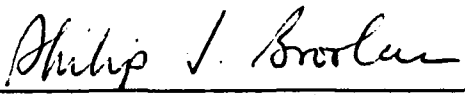
Approved by:



Lieutenant Colonel Thomas A. Hooper, M.A. Monograph Director



Colonel L. D. Holder, MA Director, School of Advanced Military Studies



Philip J. Brookes, Ph.D. Director, Graduate Degree Programs

Accepted this 16th day of December 1988.

ABSTRACT

GERMAN GENERAL OFFICER CASUALTIES IN WORLD WAR II -- HARBINGER FOR
U.S. ARMY GENERAL OFFICER LOSSES IN AIRLAND BATTLE?
by Major French L. MacLean, USA, 53 pages.

This monograph discusses German general officer casualties in World War II with respect to possible U.S. Army general officer losses in AirLand Battle. Such losses adversely affect both command and control and morale in large unit operations. This monograph hypothesizes that factors of doctrine, personal combat experience, training, and command rotation combined with battlefield lethality to cause extremely high senior officer casualties in German World War II Blitzkrieg operations; and will cause similar losses in future U.S. AirLand Battle operations.

The monograph first examines German general officer casualties, specifically 136 German general officer division, corps, and army commanders killed in action from 1939-1945. The monograph analyzes German war fighting doctrine, World War I combat experiences for these men, general officer training courses, and command rotation flaws which combined with the high lethality of the battlefield in World War II to help produce these significant losses. Next, the factors of AirLand Battle doctrine, Vietnam combat experience for current U.S. Army generals, general officer training courses, and anticipated command rotation policies are examined for similar trends in the U.S. Army.

The monograph suggests that the factors examined for the German general officers are valid; they did contribute to the high senior officer losses the Germans experienced, and the similar factors looked at for American generals show the potential for similar losses if the U.S. must go to war. Although these anticipated losses cannot be fully eliminated, the paper suggests some means for reducing such losses.

Table of Contents

	Page
I. Introduction	1
II. German General Officer Casualties	4
III. Current Indicators for Future U.S. Army General Officer Losse	28
IV. Conclusion	36
Endnotes	40
Bibliography	48

Section I

INTRODUCTION

Superior performance in combat depends on three essential components. First and foremost, it depends on superb soldiers and leaders... (FM 100-5) [1]

In the theoretical realm, Jomini defines a decisive point as one which enables its holder to make a correct application of the principles of war. He further states that arrangements should be made for striking the decisive blow upon this point. [2] Decisive points can be classified into three categories: physical, cybernetic, and moral. Cybernetic decisive points comprise command and control and the commanders who exercise it. [3] Charismatic military commanders also influence the moral domain of battle. Just as they are a strength of a military force, they can also be a weakness as both the moral and cybernetic systems can be adversely affected by the loss of senior commanders.

Significant general officer casualties in World War II severely strained the German command and control system. Enemy action was the direct cause for the losses. Indirectly, however, German doctrine, training, personal experiences, and increased battlefield lethality magnified the problem. This monograph examines those indirect factors to see if: one, the factors are present in the U.S. Army today, and two, if so, what applicability they may have on AirLand Battle. If they are present, the paper will suggest corrective actions which can

reduce general officer losses and perhaps prevent a future breakdown in our own command and control system.

The monograph will review several issues as it attempts to examine this problem. Section Two reviews both German Army doctrine on senior level battlefield leadership and their training courses for division and corps commanders. Next, the paper looks at previous battlefield experience for German general officer commanders killed in action to examine their own understanding of battlefield lethality. Third, the monograph analyzes command rotation factors for each man to see if longer command experience reduced individual casualties. Finally, the section reviews individual division histories and microfilm wartime records to determine the cause of death for each general. This will provide a summary of the impact of doctrine and training programs and to determine the scope of battlefield lethality.

Section Three will examine current U.S. Army beliefs concerning senior level leadership on the battlefield. This review will commence with the role of senior commanders in AirLand Battle as expressed in Army operational and leadership doctrine. Next, it will look at general officer participation at the National Training Center and at the curriculum for training courses for division and corps commanders, both with respect to general officer battlefield dangers. Third, the section will examine generic Vietnam battlefield experiences for current U.S. Army general officers, aspects of command rotation procedures, and projected battlefield lethality to see if similar

indicators of future heavy general officer losses exist.

AirLand Battle depends on excellent leaders at all levels. Senior commanders may well suffer significant losses, even if they do everything "right". It is the intent of this paper to see if we are making it easier for the enemy to inflict these losses, and if so, to correct the pattern and enhance protection for these individuals.

Section II

GERMAN GENERAL OFFICER CASUALTIES

The time has now come to examine a constituent of fighting power that, perhaps more than any other, decides the outcome of wars: leadership. (Martin van Creveld) [4]

German general officer casualties in World War II were staggering and adversely affected unit proficiencies. Due to these losses, divisions were often commanded by colonels, regiments by majors, and battalions by captains. Retired General Josef Foltmann, a leading expert on German officer fatalities, presents the following summary of these losses: [5]

Table 1

Army General Officer Casualties (by type)

Killed in Action/Died of Wounds	223
Accidental Deaths	30
Suicides	64
Executed (By Germany during WWII)	20
(By Allies after WWII)	33
Died (In Prisoner of War Camps)	128
(Of War Related Health Problems)	145
Missing in Action	32

This monograph will focus only on those general officers who were in command of divisions or higher formations, and who were killed in action or died of wounds. These positions correspond directly to current U.S. Army force structure command positions, with lessons learned concerning these men still relevant today. Some 136 of these officers fall into this category. [6] The extent of damage to the German command and control system (cybernetic domain) by general officer losses is reflected in the following two tables. Grades are given in German to avoid confusion and are explained in the endnotes.

Table 2

General Officer Commander Casualties (by grade) [7]

Grade	Number Killed
Generaloberst	1
General der Infanterie, etc.	19
Generalleutnant	55
Generalmajor	61
Total	136

Table 3

General Officer Commander Casualties (by position)

Grade	Number Killed
Army Commanders	3
Corps Commanders	23
Division Commanders	110
Total	136

Peak unit proficiency simply could not be maintained with these losses. Over the course of the war this drain on leadership averaged a corps commander killed every three months and a division commander killed in action every three weeks! Although World War II was a very lethal war, could this problem have been minimized? An examination of German doctrine, general officer training, battlefield experience, and command rotation suggest it could have been.

GERMAN DOCTRINE

German Army doctrine traditionally valued frontline leadership. A portion of the January 1, 1918 training directive entitled "The Attack in the War of Position" commented on the role of senior leaders on the battlefield:

The greater the mobility of the attack the farther forward is the proper place of senior commanders, often on horseback. [8]

Later doctrine, refined in the 1930's, also stressed frontline leadership by senior level leaders. The German Army's views on war, which would be executed in World War II, were outlined in 1936, in the Truppenfuhrung (Command of Troops). The following guidelines reflected the importance of frontline senior level leadership: [9]

Personal influence by the commanding officer on his troops is of the greatest importance. He must be located near the fighting troops.

A divisional commander's place is with his troops...During encounters with the enemy seeing for oneself is best.

Commanders are to live with the troops and share with them danger, deprivation, happiness, and suffering. Only thus can they gain a real insight into their troops' combat power and requirements.

The example of officers and men in commanding positions has a crucial effect on the troops. The officer who demonstrates cold-bloodedness, determination, and courage in front of the enemy pulls the troops along with himself.

German officers of all grades took this doctrine to heart, achieved spectacular tactical successes, and paid a high price in blood. There was nothing surprising in this, as their attitude to combat had already been strongly shaped during World War I.

WORLD WAR I SERVICE

The World War I service of many German junior officers who later became generals in World War II was characterized by a high degree of frontline service and bravery. The early experience of these officers helped form their basic professional ethic concerning leadership, personal danger, and responsibility to their men. That ethic would be reflected in their wartime actions some twenty years later. By examining this early wartime service we can better understand these officers frame of mind with respect to leadership and their concept of battlefield lethality; a concept that would be greatly outdated in the next war.

One measure of frontline service and bravery is awards. This paper will use the awards and decorations received by the World War II German generals killed in action as a guide to the level of service and bravery they displayed in combat. At this point a caveat is in order. It is recognized that in any military awards system, individual examples of inequity exist, but it is beyond the scope of this monograph to examine each award on a case by case basis to determine validity. The key awards used as indicators are primarily the Iron Cross and the Wound Badge.

During World War I the basic decorations for frontline bravery were the Iron Cross 1st Class and 2nd Class. The Iron Cross 2nd Class served to reward a single act of bravery in combat beyond the normal

requirements of duty, while the Iron Cross 1st Class was usually awarded for an additional three to five significant acts of bravery. [10] Both these awards, while subjective in the eyes of the respective approving commander, were nevertheless highly coveted and earned a large degree of respect for the recipient.

To measure wounds received in combat, Kaiser Wilhelm II instituted the Wound Badge on 3 March 1918. Different grades were awarded based on the number of incidents in which wounds were received. The wound badge in black designated one or two wounds, the badge in white for three to four wounds, and the badge in yellow-gold for five or more wounds. [11]

World War I awards are known for ninety-seven of the German generals killed in action. As seen in the following table, ninety-five percent were awarded one of the grades of Iron Cross. Fifty-four percent were wounded in action at least once, while thirteen percent were wounded on three or more combat engagements. Repeated demonstrated bravery in action was expected of German junior officers during the war and this professional ethic is amply represented by the exploits of these individuals. Overall it is evident that these junior German officers, who were later killed in action as general officers during World War II, developed their concept of battlefield leadership and danger the hard way -- they earned it. [12]

Table 4
Recipients of World War I Decorations

Award	Number	Percentage of Total (Based on 97 Officers)
Iron Cross 2nd Class	7	7
Iron Cross 1st Class	86	88
Wound Badge in Black	40	41
Wound Badge in White	12	12
Wound Badge in Yellow	1	1

WORLD WAR II SERVICE

As shown, a large number of German general officers killed in World War II had exceptional frontline service in World War I. The next step in this evaluative process is to determine whether these men continued to show frontline service and bravery as senior officers. Once again we will rely on the Germans' own system of awards and decorations to determine the extent of this assertion.

On September 1, 1939 Hitler instituted the Knight's Cross of the Iron Cross for continuous acts of exceptional bravery, or in the case of higher ranks for successful execution of battle or for formulating outstanding battle plans. [13] Recommendation for the Knight's Cross required the endorsement of the chain of command through army commander with final approval made by Hitler. [14] Prerequisites included previous award of both classes of the Iron Cross. Enlisted personnel as well as officers were eligible for this award. In the course of the war, some 7,300 Knight's Crosses were awarded. [15]

On June 3, 1940 Hitler instituted the next higher grade the of Knight's Cross, the Knight's Cross of the Iron Cross with Oakleaves. This award recognized previous winners of the Knight's Cross for continued significant bravery and initiative. Enlisted personnel, officers, and foreign military personnel were eligible to receive the Oakleaves. By war's end 882 had done so. [16]

One year later Hitler again introduced another higher grade of award the Knight's Cross of the Iron Cross with Oakleaves and Swords. This grade recognized previous recipients of the Oakleaves who accomplished additional feats of military achievement. Although all German military personnel were eligible to receive this award, only 159 officers actually did. [17]

On July 15, 1941 Hitler introduced what was believed to be the final upgrade, the Knight's Cross of the Iron Cross with Oakleaves,

Swords, and Diamonds. [18] Again it rewarded further achievement. By the end of the war only twenty-seven had been awarded. [19]

Division, corps, and army commanders figured prominently as recipients of all of these awards. The following is the distribution of these awards: [20]

Table 5
Highest World War Two Decorations Received
by General Officer Commanders Killed in Action

Award	Number	Percentage of Total
Knight's Cross	57	42
Oakleaves	28	21
Swords	6	4
Diamonds	1	0.7
Total	92	68

It is very apparent from these results that the general officer commanders continued to display high degrees of bravery and independent action during the Second World War. Over two-thirds received Germany's highest awards for valor and achievement. These are not characteristics the German High Command would have wanted changed in their combat leaders -- bravery and independent action went hand in hand with their concept of Auftragstaktik. If, however, doctrine and personal bravery caused leaders to command from the front, then command rotation and general officer training courses put them at a severe disadvantage when they got there.

ROTATION OF GENERAL OFFICERS AND COMMAND DURATION

The history of the German general officer replacement system in World War II is an interesting saga; one in which, the system attempted unsuccessfully to meet increasing officer needs with decreasing personnel assets. Initially efficient, it deteriorated during the war in part due to heavy officer casualties.

During preparation for mobilization in the late 1930s, the Central Branch of the Army General Staff filled general officer vacancies to brigade level and General Staff positions. When war began general officers were directly assigned by a different organization -- the Army Personnel Office. After 1942, the procedure changed again. General officer unit commanders were assigned by the Personnel Office

in accordance with instructions from the Commander in Chief of the Army but with input from the Chief of the Army General Staff. [21] Senior General Staff officers, on the other hand, scheduled for assignment as chiefs of staff for army groups, armies, and corps, were selected directly by the Chief of the Army General Staff. Many of these officers were also in demand for unit command. [22] As seen this was quite a convoluted process even without serious personnel losses.

Beginning in the Fall of 1942, losses began to mount for both line and General Staff officers. At the same time the Personnel Office initiated increased requirements for more General Staff officers to be released for duty as unit commanders at the front. [23] Unfortunately, there were already too few General Staff officers for the necessary General Staff positions. This condition had existed since the beginning of the war. On September 1, 1939 there were only 508 General Staff officers to fill the 589 General Staff positions. To further compound this problem, some 93 of these officers were not in General Staff positions but were serving as commanding officers. [24]

Compounding these problems was branch parochialism. Older generals viewed infantry and artillery as the dominant branches and attempted to control the Army Personnel Office to the detriment of other branch officers. [25] This was especially so with respect to the formation of the new panzer forces. Hasso von Manteuffel stated that the new panzer branch required special leaders and commanders, but the older arms displayed opposing views. To maintain stability within the armored

force, Heinz Guderian reported directly to Hitler as Inspector-General of Armored Troops and had full input concerning appointments to the command of armored formations. [26]

It was not always possible to appropriately fill each position with the exact branch officer desired. For example, only sixty-one per cent of all panzer corps commanders were of the panzer branch, while forty-one percent of the commanders of the mountain corps were mountain troop officers. Artillery and cavalry officers commanded both infantry and panzer corps. Infantry generals served across the entire spectrum of units.

Further compounding the problem was the increasing number of units requiring general officer commanders. The strength of the German Army in December 1940 stood at 140 divisions. This total increased to 208 at the start of the Russian Campaign, to 226 in July 1942, and to 243 by July 1943. By the beginning of June 1944 the division total had reached 257. [27] The number of corps also increased during the war, peaking at seventy-seven in January 1945. [28]

Many general officers transferred from more protected rear area staff assignments directly to the front with fatal results. GL Henning von Thadden, for example, remained in Germany from 1943 to 1945 as the Chief of Staff for the 1st Military District Corps. He then went to the Eastern Front to command the 1st Infantry Division and was killed within two months. [29] GM Otto Beutler, commander of the 340th

Infantry Division, served with the General Staff in the Organization for Total War office in Berlin for 15 months before assuming command. He was killed in action just 35 days later. [30] GM Werner Duerking served as the commander of the War School at Dresden for about two years before going to the Eastern front as commander of the 96th Infantry Division. He died of wounds received in combat after only ten days in command. [31]

Further examples of lethality and command durations for general officers killed in action are shown below: [32]

Table 6

Command Durations for General Officer Commanders Killed in Action

Duration	Number of Commanders	Percentage of Total
One Month or Less	28	21
Two to Five Months	33	24
Six to Nine Months	28	21
Ten to Twelve Months	16	12
More than Twelve Months	31	22

It is evident that some type of maturation occurred the longer one stayed in command. Forty-five percent served for less than five months before being killed, while sixty-six percent fell before their tenth month in command. If an individual could survive the initial dangerous months, he became more likely to safely complete his command. The distribution of command duration prior to being killed in action supports the danger to newer, less experienced general officer commanders in combat. This in turn is partly the result of increased battlefield lethality.

BATTLEFIELD LETHALITY

Battlefield lethality increased from World War I to World War II, multiplying the ways a general officer commander could be killed in action. It included enemy artillery, minefields, anti-tank fire, small arms fire, grenades, air attacks, tank fire, snipers, and partisans. Many of these causes, such as air attacks and tank fire, were relatively infrequent occurrences in World War I. Others, like artillery fire directed by the results of radio direction finding, were quantum improvements over previously less accurate acquisition means. The turbulent situation during the last years of the war limits our knowledge of the exact cause of death to only forty-one percent of general officer fatalities. Assuming Table 7 reflects a relative consistency in cause of death, the enemy attack means were quite varied:

Table 7
Causes of Death for General Officer Commanders

Cause of Death	Number	Percentage of Known General Officer Deaths
Artillery	8	14
Minefield	5	9
Anti-Tank Fire	5	9
Small Arms Fire	7	13
Grenade	3	5
Air Attack	18	32
Tank Fire	2	4
Partisans	5	9
Sniper	3	5

In World War I personal danger for officers had been the great artillery barrages and heavy machine gun fire. Although these two weapons systems again accounted for many general officer deaths, a wide variety of other systems played an equally deadly role. The total number of causes of death, however, tell only part of the story. The following accounts of individual demises reflect this increased lethality, and better describe the significant dangers to these senior commanders.

AIR ATTACK

The impact of enemy air attack on German general officers began to be felt early in the war. During the campaign for North Africa, two generals were killed. GM Suemmermann, commander of the 90th Light Division, was killed by a strafing British aircraft at 1900 hours, 10 December 1941. He was riding in his command vehicle when hit. GL Thomas, commander of the newly formed 999th Light Africa Division was shot down enroute to Tunis 1 April 1943. [33]

Just as GFM Rommel had predicted, Allied air power played a decisive role during the invasion at Normandy. Three German generals were killed in air attacks. GM Stegmann, commander of the 77th Infantry Division, was struck in the head by 20mm cannon fire from a strafing Allied fighter plane while driving in his command car near Briebeque France, 18 June 1944. The day before GL Hellmich, commander 243rd Infantry Division, was killed by a strafing fighter near Cherbourg. [34] GdA Marcks, commander LXXIV Corps, was killed enroute to Carentan by another strafing fighter when his wooden leg prevented a quick enough escape from his automobile. [35]

Seven general officers are known to have died by air attacks on the Eastern Front. One army commander, GdI von Krosigk, 16th Army, was killed at his headquarters at Zabeln by a Soviet fighter-bomber attack 16 March 1945. [36] Five corps commanders also died. GdI von Briesen, LII Corps, was killed at 1230 hours, 20 November 1941 southeast of

Andrejewka by attacking Soviet aircraft. [37] GdA Martinek was killed by a bomb splinter, 28 June 1944 east of the Beresina River while commander of the XXXIX Panzer Corps. [38] That same day GdA Pfeiffer, commander VI Corps, was killed from the air in the vicinity of Mogilev. [39] Soviet air attacks also killed GdI Wegener, commander L Corps, on 9 September 1944 as he was enroute to visit a subordinate infantry division in Kurland. [40] Finally, GdI Zorn, commander XXXVI Panzer Corps, was killed from the air enroute to a frontline unit on 2 August 1943. [41]

MINEFIELDS

Surprisingly enough, at least five commanders died in incidents involving minefields. On 12 September 1941, GO Ritter von Schobert, commander of the 11th Army, was killed when his Fieseler Storch aircraft attempted a forced landing and inadvertently landed in a Soviet minefield killing all aboard. [42] GL Loeweneck, commander of the 39th Infantry Division, drove into a minefield north of Petschenegi, [43] and GL Schmidt, commander of the 50th Infantry Division, blundered into another minefield in the Russian Kuban while visiting an artillery firing position. [44]

Two other commanders died in Africa from minefield effects. GM von Randow, commander of the 21st Panzer Division was killed near Tripoli, 21 December 1942 by a mine laid by the the British Long Range Desert

Group. [45] "Friendly" minefields also took their toll. GL Fischer, commander of the 10th Panzer Division, was killed on 1 February 1943 near Mareth when his staff car driver inadvertently drove into a poorly marked Italian minefield. [46]

PARTISANS

The German military effort in World War II took many forms and went beyond traditional conventional combat. Many German units were engaged in rear area missions, or had extensive partisan problems in their own frontline areas. The Germans referred to these guerilla bands as "bandits" but whatever the name, they played a crucial role in operations.

Five German general officer commanders are known to have been killed in action against partisan units. On 26 August 1943 GL Renner, commander 174th Reserve Division, was ambushed near Ozarow while enroute to the Deba maneuver area and killed. Although the route was known to be in a partisan area, Renner was accompanied on his visit by only his adjutant, a staff veterinarian, and five other staff personnel. [47] GM Herold, commander 10th Motorized Division, was also killed in this manner when he was ambushed returning from a visit to the division reconnaissance battalion near Bochnia Poland, 28 November 1944. [48] In Italy, GM Crisolli, commander 20th Luftwaffe Field Division, was killed by partisans in the vicinity of the XIV Panzer Corps headquarters, 12 September 1944. [49]

ARTILLERY

Artillery continued to play a dominant role in warfare during World War II, and took a deadly toll of German generals. At least eight were killed by this system. Especially hard hit were panzer generals. On 6 December 1941, GM Neumann-Silkow, 15th Panzer Division, was fatally wounded by British artillery fire which landed next to his command tank. [50] When the rounds hit, Neumann-Silkow was exposed in the commander's hatch and had no time to seek safety inside the turret. [51] The following year, GM von Bismarck, 21st Panzer Division, was killed by British mortar fire while advancing with a lead battalion near El Alamein. [52]

On the Eastern Front two more panzer generals were killed by artillery. GM Mack, 23rd Panzer Division, was killed by a Soviet mortar barrage on 26 August 1942 near Nowo Poltawskoje. At the time he was forward with the 128th Motorized Infantry Regiment. [53] On 28 January 1944, GM Schulz, 7th Panzer Division, was hit in the head by mortar fragments while leading a panzer attack from his command tank near Schepetowka. Although medically evacuated, he died enroute to a field hospital. [54]

Artillery was just as dangerous to non-panzer commanders as shown when GL Rittau, 129th Infantry Division, was killed by artillery riding in his command vehicle near Martinowo on 22 August 1942. At the time he was with the 427th Infantry Regiment "for a picture of the situation and the handling of the battle." [55]

SNIPERS

Soviet snipers killed at least three general officers on the Eastern Front. As a lesson from the Finnish War, sniper training in the Soviet Army increased through inter-unit competitions; and throughout the war snipers were greatly respected. Additionally, one of the most proficient characteristics of Soviet infantry and reconnaissance units during the war was their ability to infiltrate German positions, particularly in winter and in rough terrain. [56]

Snipers first struck on 7 April 1942 when GM Scheidies, 61st Infantry Division, was shot in the head and killed in operations near Gluschtza. [57] During the Battle of Kursk, another general fell to the proficient marksmen. GM von Huenersdorff, 6th Panzer Division, was shot in the head on 14 July 1943. He died three days later at a Kharkov hospital. At the time of the incident, he was enroute from a forward detachment to the division forward command post. [58] The following year, a Soviet sniper shot GL Kress, 4th Mountain Division, in the head and killed him near Novorossiysk. [59] One factor assisting the Soviets in this effort was the German generals' uniforms, which displayed prominent red insignia designating this rank. Although camouflage clothing appeared in greater numbers as the war progressed, wartime photographs show that most German generals did not wear this tactical garment but stayed with the traditional distinctive uniform.

TANK AND ANTI-TANK

Despite the fact that tank and anti-tank weapons often accounted for decisive tactical successes, both played a lesser role in accounting for German general officer casualties. Two generals were found to have been killed by Soviet tanks. GM Gruner, 111th Infantry Division, was killed by main gun fire from a T-34 tank on 12 May 1944 during the attempted German evacuation of the Crimea as the German positions were overrun. [60] On 27 January 1945, a deep Soviet tank raid killed GM Finger, 291st Infantry Division, near Tschenstochay Poland. [61] Anti-tank fire killed two generals. One, GL von Prittwitz u. Gaffron, 15th Panzer Division, was killed 25 miles west of Tobruck by British anti-tank fire on 10 April 1941. [62]

SMALL ARMS

Many of the general officer casualties from small arms came in the form of ambushes. Shortly after noon, 6 September 1942, GM Buck, 198th Infantry Division, was ambushed and killed while driving in his command car over a bridge near Klutschewaja. A reconnaissance element from the 723rd Soviet Rifle Regiment was hiding under a bridge along this route, recognized the division commander's auto pennant on the vehicle, and destroyed the car with two anti-tank hand grenades. [63] On the Western Front, soldiers of the 82nd Airborne Division ambushed GL Falley, 91st Air Landing Division, on D-Day in Normandy. Falley's

auto was hit by Browning Automatic Rifle fire as he returned from wargames. He was killed instantly. [64]

In reviewing these accounts of general officer fatalities several conclusions can be drawn. First, most of the deaths occurred from quick unexpected attacks. Air bombardments, artillery barrages, hidden minefields, snipers, and partisan attacks were quite different than the deadly but more methodical operations these men had experienced in World War I. Second, a great many deaths occurred in vehicles moving through the battle area. Such movement attracted air attacks and set up potential ambush situations. Although the commanders had to move by vehicle to control the battlefield better, it appears most did so without an adequate escort capable of discouraging some of the attacks. Much of this movement was done in hours of very good visibility which facilitated enemy air attacks. Some of their disdain for enemy capabilities may have resulted from Luftwaffe reports of friendly air superiority or the belief that a staff car was too small a target to be effectively engaged. Finally, throughout the war German generals retained distinctive but dangerous markings of their grade. They continued to wear distinctive uniforms and flew vehicular pennants advertising their position. Both provided target information to snipers, ambushes, and partisans.

Given this high level of battlefield lethality, it would seem that general officer training would be tailored to reflect these dangers. Unfortunately it did not. Despite the establishment in January 1943 of

a four to six week pre-command course for division and corps commanders, no protective measures were included in the lessons. [65]

GERMAN GENERAL OFFICER CASUALTIES - CONCLUSION

In Section II we have seen the magnitude of German general officer commander casualties on all fronts during World War II. Doctrine, from the First World War to the Second, emphasized frontline leadership. Personal bravery, reflected in their World War I service was carried into the next war by all the generals later killed in action. However, their concept of personal battlefield lethality, shaped as it was in World War I, was outdated by the increased lethality of WWII.

Rotation of general officers within the German Army was a case of too few senior grades for too many positions in the expanded army. To meet the requirements, competent staff officers were often sent to the front with inadequate preparation, where many died within a few months of assuming command. The increased battlefield lethality multiplied the ways in which senior leaders could be killed and included air attacks, artillery, partisans, minefields, and snipers. Many of the fatal engagements occurred while moving in command vehicles as the commanders traversed the battlefield. Finally, training was inadequate to prepare these men for all the threats they would encounter.

The doctrine of forward senior leadership and the quality of general officers carried the Germans to a high level of tactical and operational success. Current U.S. Army AirLand Battle concepts also depend on these two foundations for future battlefield success. But are the same factors in these concepts present in our own preparation for war? If so, will the factors cause high losses in U.S. Army general officer leadership?

Section III

CURRENT INDICATORS FOR FUTURE U.S. ARMY GENERAL OFFICER LOSSES

Heroism is the soul of leadership, whether a man is leading himself by placing his convictions before his interests, ...or to win the cause his country is fighting for. Both forms are essential in generalship. (J.F.C. Fuller) [66]

U.S. ARMY AIRLAND DOCTRINE

Current U.S. Army doctrine stresses frontline leadership by senior level leaders. FM 100-5, Operations, succinctly states the importance of this concept to future battlefield success. [67]

The personal influence of large joint and combined force, field army, corps, and division commanders will have a major bearing on the outcomes of battles and campaigns.

The most essential element of combat power is competent and confident leadership. Leadership provides purpose, direction, and motivation in combat.

FM 22-103, Leadership and Command at Senior Levels, also states the importance of this combat element. [68]

...Failure to balance it (Management) with sound application of leadership and exercise of command can have lasting consequences, such as ...not personally getting out and seeing the battlefield when it is appropriate.

It is essential that leaders share the dangers and hardships of their units because they demonstrate their professionalism by everything they say and do.

The doctrine is clear. U.S. general officers will be called on to provide frontline direction. Most have already been attuned to such direction by combat as junior officers in Vietnam.

VIETNAM SERVICE

Vietnam service was experienced by most of the current generation of U.S. Army general officers and will continue to be a factor for some years to come. Much as with young German officers some seventy years before, this combat service has undoubtedly shaped many of our own generals' professional ethics, concept of personal danger on the battlefield, and responsibility to their soldiers. It is safe to say that Vietnam was the battlefield where today's current generals conceived their wartime leadership traits and habits.

To measure this degree of frontline service, the monograph will look at the awards and decorations received by 495 general officers as reported in 1986. The primary awards won by these men include the Medal of Honor, the Distinguished Service Cross, the Silver Star, and the Purple Heart. [69] Possession of any of these awards certainly indicates frontline service, and the distribution of bravery awards to officers who later became generals supports this: [70]

Table 8

Vietnam Service Decorations of U.S. Army General Officers

(As published in Army Pamphlet 360-10, 21 February 1986)

Award	Grade							
	GEN		LTG		MG		BG	
	#	%	#	%	#	%	#	%
Medal of Honor (As highest award)	0	0	0	0	0	0	1	.4
Distinguished Service Cross (As highest award)	3	23	4	8	1	.5	8	3
Silver Star (As highest award)	7	54	20	41	35	19	30	12
Other (Bronze Star, Soldier's Medal, Distinguished Flying Cross) (As highest award)	3	23	25	51	152	81	206	84
Purple Heart	4	31	10	20	40	21	44	18

These results indicate that many current U.S. Army generals demonstrated bravery in combat during Vietnam. Over three percent of these officers were awarded the Medal of Honor or the Distinguished Service Cross for their gallantry, while a further eighteen percent received the Silver Star. The majority of the other officers were awarded the Distinguished Flying Cross, Bronze Star, or Soldier's Medal as their highest decoration during this conflict. Additionally, almost twenty percent were wounded in action. Although statistics for cause of wound were not available for this study, many of these individuals were most probably wounded by small arms, mortar and rocket attacks, booby traps, and helicopter crashes after receiving enemy fire. Their most vivid memories of battlefield lethality are probably of these types of weapons.

GENERAL OFFICER TRAINING

General officer commanders' courses and the National Training Center do not stress the battlefield hazards to general officers. The U.S. Army Command and General Staff College's School for Professional Development presents a detailed program of instruction to the Division Commander/Assistant Division Commander Pre-Command Course. The course includes historical perspectives on warfighting and segments on operational art, tactics, joint operations, dynamics of combat power, synchronization of deep, close and rear operations, and doctrinal tenets. Battlefield survival is not included. [71]

The National Training Center (NTC) also does not present a realistic picture of battlefield lethality to general officers. During a 1988 discussion of the role of general officers visiting units at the NTC, the FORSCOM Leader's Orientation command briefer stated in response to a question on general officer training "They [general officers] get to roam where they want on the battlefield." [72] This "roaming" is without MILES equipment or any other system which might convince generals of their own vulnerability. Should general officers eventually "MILES up", many of the systems lethal to them are currently not totally sophisticated to accurately represent the threat. Artillery fires often are not responsive. Minefield "kills" must now be observed by controllers to be effective. FASCAM obstacles are marked by yellow smoke, giving an unreal picture as to their dimensions. Such a training environment sets the general up as a safe neutral observer, rather than the lucrative target he would be in actual combat.

COMMAND DURATION

Rotation of general officers indicates that at the outbreak of hostilities many will be new in command. Although some division and corps commanders will remain in command, others may be required to fill higher positions as the army expands. Other less experienced officers will be promoted to fill these vacancies, especially at division level. Just as with the German commanders in World War II,

the initial period of combat will be most dangerous for these new commanders. An even greater burden will be placed on Reserve Component general officer commanders who will have to transition from civilian occupations to wartime frontline assignments with perhaps only a few weeks to complete final preparations for war.

BATTLEFIELD LETHALITY

Battlefield lethality has increased from previous conflicts multiplying the ways a general officer commander can be killed in action. Current U.S. Army doctrine, as expressed in FM 100-5, Operations, characterizes the future high- and mid-intensity battlefield as highly destructive. Although this manual does not emphasize the destructiveness with respect to senior leaders others do. FM 100-2, The Soviet Army, does amplify the dangers inherent to senior leaders as seen in Soviet tactics and equipment.

Soviet artillery poses a great threat to commanders at all levels. A target acquisition battery is organic to a Russian divisional artillery regiment. Together with Soviet fire planners, their target priorities are first, nuclear-capable U.S. artillery, missiles and their control systems, and second command posts and communications nodes. Both areas are frequent locations for senior officers. [73] Once a target is located, Soviet fire planners implement required norms for suppression or destruction. A dug-in enemy command post

would thus rate 150 rounds of 152mm howitzer fire or 60 rounds of 203mm howitzer fire. A U.S. command post in the open or a command vehicle, possibly with a division commander on board, would draw either 40 rounds of 152mm or 15 rounds of 203mm. In both cases the area would soon be under a very lethal torrent of steel. [74]

Soviet air defense weapons are both prolific and effective at all echelons. Although U.S. commanders frequently employed command and control helicopters in Vietnam for increased flexibility, such techniques would probably result in many lost aircraft and commanders if attempted against Soviet forces.

As amply demonstrated at the National Training Center, the reconnaissance battalion of the motorized rifle and tank division is a formidable entity. Within this unit, there are three HF/VHF/UHF radio direction finders and nine VHF/UHF radio intercept receivers. [75] Both types of equipment will enable the Soviets to locate senior commanders. At the Soviet Front level, an entire radio/radar intercept regiment is devoted to this electronic warfare task. This regiment has one battalion of radio interception equipment and one battalion of radio direction finding equipment. [76]

Soviet aviation assets also pose a lethal problem for general officer commanders. According to the Soviets, aviation assets supporting Fronts, armies, and divisions can execute independent operations very similar to the ones on the Eastern Front some forty-

five years ago. The majority of aircraft will attack NATO nuclear weapon systems, command and control centers, and airfields. [77] Although in training exercises the Soviets have shown some reservations about employing "free hunting" rear area interdiction flights until air superiority is achieved, we cannot discount the possibility of this technique being used in selected areas. Given the single (or point) classification of command vehicles, Soviet doctrine would call a low level or dive delivery attack by a high performance aircraft, or an ATGM/rocket attack by a rotary wing one. [78]

Additionally, considerable Soviet aviation interest has been directed to aviation "strike groups", organizations capable of conducting independent operations against key enemy targets at strategic and operational depth. These "strike groups" could consist of upward of two to three air divisions (216 to 324 aircraft!) in strength. This concept would seem to be directed at NATO corps and army level targets and could include command and control assets. [79]

Finally, there are more Soviet organizations directed at command and control systems such as airborne/heliborne forces and unconventional warfare (UW) assets. Tactical airborne and heliborne forces often have as their objectives nuclear weapons and command installations. Soviet unconventional warfare, consisting of a variety of military and paramilitary operations is a key element of Soviet doctrine. Some UW missions include disruption of enemy command and control, and assassination of key political-military leadership. [80]

Section IV

CONCLUSION

The quality of commander...determines the fighting power of a unit. The higher this quality, the stronger and the more mobile the conduct of war. (Martin van Creveld) [81]

This monograph indicates that the factors of doctrine, training, personal experience, and increased battlefield lethality contributed to heavy losses of German general officer commanders in World War II. The evidence further indicates many of these same factors are present again as the U.S. Army prepares for AirLand Battle. Unfortunately, the result may well be very heavy losses for our own senior leadership in the next conflict. As a conclusion we will compare the two eras by each factor to see if this is a condition that could be changed to reduce these potential general officer losses.

DOCTRINE

The German Blitzkrieg offensive doctrine required competent senior leaders to be successful. Success demanded they be well versed on the current tactical battlefield situation if they were to make quick accurate decisions crucial to the doctrine. To gain this current tactical insight, the commanders led from the front. AirLand Battle also requires frontline leadership to properly synchronize battlefield assets and maintain initiative. Neither doctrine can be successful

unless senior leaders are "up-front". Despite the possibility of even severe senior officer losses, senior leadership doctrine should not be changed.

BATTLEFIELD EXPERIENCE

Most of the German generals in World War II had served twenty years earlier as junior officers in World War I. Their views of battlefield lethality and personal leadership were shaped in this earlier war. In much the same way, current senior U.S. Army generals served in Vietnam as junior officers. Their views of war were formed in a conflict of nebulous frontlines, friendly air superiority, and overwhelming friendly ratios of firepower. This view of war may be an asset in future Low Intensity Conflicts, but a liability in Mid- to High- Intensity Wars.

COMMAND ROTATION

The German Army was forced to meet increasing general officer requirements with decreasing assets as the army expanded and senior leader losses began to mount. This resulted in many generals quickly transferring from relatively safe rear area assignments to dangerous frontline ones. This in turn caused a high level of new commander deaths before being "acclimatized" to the current tempo of battle.

Part of the problem was undoubtedly caused by a fragmented personnel assignment system which jealously competed for assets. The U.S. Army should be in somewhat better condition as general officer assignments are more centralized, but as the army expands during wartime, with Reserve Component generals assuming active assignments, we may face a similar situation.

BATTLEFIELD LETHALITY

It is probably a fundamental truth that the next war will most often be more lethal than the preceeding one. German general losses in World War II seems to bear out this truth. Future Mid- to High-Intensity Wars will be won by senior leaders in the frontlines even though this will provide an even greater degree of lethality to them. Protection may not be able to keep pace with enemy destructive capabilities.

TRAINING

The German Army had a very comprehensive officer training program, but did not include necessary aspects of general officer survival on the battlefield. This point, combined with preconceived WWI experiences, contributed to many fatalities. Although division and corps commander training courses were in existence, many commanders

did not attend, and those that did were not taught appropriate lessons on general officer lethality. It is in this area that the U.S. Army can make the most improvements. Neither the Division Commanders' Course or the National Training Center currently emphasize commander survivability. Both, however, could be modified at little cost. Compared with the moral and cybernetic "costs" at the loss of each senior commander, this may be "money" well spent up front. We can be assured that at least 136 dead German general officer commanders would have agreed with these changes!

Endnotes

- [1] U.S. Army, FM 100-5, Operations. Headquarters, Department of the Army, Washington, D.C. 1987, p.5.
- [2] Antoine Henri Jomini. The Art of War. Westport, Connecticut: Greenwood Press, 1970, p.170.
- [3] Melvin E. Richmond. Communist Insurgencies and the Relevance of the Concepts of Center of Gravity and Decisive Points. School of Advanced Military Studies Monograph, U.S. Army Command and General Staff College, Fort Leavenworth, Kansas, 1988, p.6.
- [4] Martin van Creveld. Fighting Power, German Military Performance, 1914-1945. Potomac, Maryland: C&L Defense Consultants, 1980, p.127.
- [5] Josef Foltmann, and Hanns Moeller-Witten. Opfergang der Generale. Berlin: Bernard & Graefe, 1959, p.85. Foltmann served as the division commander for the 164th Light Division, the 338th Infantry Division, and Fortress Division Crete. He finished the war on the Army High Command Staff in Berlin.
- [6] Wolf Keilig. Die Generale des Heeres. Friedberg, FRG: Podzun-Pallas- Verlag, 1983. This work contains biographical sketches for all general officers in the German Army. A review of this work indicates that 136 were killed in action or died of wounds. Although date and location of death are given, no information is provided as to cause of death.
- [7] Central to a thorough understanding of German general officer casualties is a review of the system of general officer grades and their equivalent American counterparts. The basic grade system is shown below:

Table 9
German General Officer Grades

German Grade	Abbreviation	English Translation	American Equivalent
Generalfeldmarschall	GFM	Field Marschal	General of the Army
Generaloberst	GO	Colonel General	General
General der Infanterie	GdI	General of Infantry	Lieutenant General
General der Artillerie	GdA	General of Artillery	
General der Panzer	GdPz	General of Panzers	"
General der Pionier	GdPi	General of Engineers	"

German Grade	Abbreviation	English Translation	American Equivalent
General der Gebirgstruppe	GdGebTr	General of Mountain Troops	Lieutenant General
General der Kavallerie	GdKav	General of Cavalry	"
Generalleutnant	GL	Lieutenant General	Major General
Generalmajor	GM	Major General	Brigadier General

In comparing German grades with American ones it should be noted that a German generalmajor was routinely a commander of a division while his American counterpart seldom was. Moving up, a generalleutnant could command either a division or corps, while his major general American counterpart most often stayed at division level. To avoid this mental conversion of grades the monograph will use German grade for all commanders. Additionally, several individuals received posthumous promotions. Grades shown in this table do not reflect posthumous personnel actions but actual grade at death.

[8] Martin van Creveld. Command in War. Cambridge, Massachusetts: Harvard University Press, 1985, pp.174-175.

[9] Truppenfuehrung. Berlin: E.S.Mittler & Sohn, 1936, pp.2,3,4,33, 34. The Truppenfuehrung can be equated with the U.S. Army FM 100-5, Operations.

[10] Both medals had originally been proposed by Colonel Gneisenau to King Friedrich Wilhelm III of Prussia in 1811, for acts of military bravery. Two years later both were officially founded and awarded to Prussian soldiers during the campaigns against Napoleon. Both awards were reinstituted by Kaiser Wilhelm I in 1870 during the Franco-Prussian War, and were open to all Germans, not only Prussians. In 1914 Kaiser Wilhelm II reopened the awards and expanded eligibility to include bravery in the field or for service to the war effort. John R. Angolia, On the Field of Honor, A History of the Knight's Cross Bearers (Volume 1-2), (San Jose: R. James Bender), 1980, Vol 1, pp.14-22.

[11] John R. Angolia, For Fuehrer and Fatherland; Military Awards of the Third Reich (Volume 1-2), (San Jose: R. James Bender), 1976, Vol 1, pp. 256,337 and 343.

[12] Rangliste des Deutschen Reichsheers (nach dem Stande 1. May 1929). Berlin: Mittler & Sohn, 1929. This book is a rank listing for all officers in the Reichswehr. Included in it is a listing of all World War I awards for each individual. Those officers who were not on the Reichswehr rolls, i.e. those who entered service at a later date or who transferred from the German police or Austrian Army in the mid 1930s are not listed. This accounts for the difference in the total figure with the 136 who were killed.

- [13] John R. Angolia, For Fuehrer, Vol 1, pp.356-357.
- [14] Martin van Creveld, Fighting Power, p.126.
- [15] John R. Angolia, On the Field, Vol 1, p.14.
- [16] John R. Angolia, On the Field, Vol 2, pp.108 and 125.
- [17] John R. Angolia, For Fuehrer, Vol 1, pp.366-367.
- [18] John R. Angolia, On the Field, Vol 1, p.52.
- [19] John R. Angolia, For Fuehrer, Vol 1, p.336.
- [20] Walter-Peer Fellgiebel. Die Traeger des Ritterkreuzes des Eisernen Kreuzes, 1939-1945. Friedberg, FRG: Podzun-Pallas Verlag, 1986. Multiple pages - each name was cross-referenced to determine if he won any of the grades of this award.
- [21] Helmut Kleikamp. "German Army High Command, The Army Personnel Office", U.S. Army Historical Division Study MS# P-041hh, (Washington, D.C.: Office of the Chief of Military History), 1952, pp.8,10. Kleikamp served in the Army Personnel Office before assuming command of the 36th Infantry Division.
- [22] Franz Halder, "Control of the German Army General Staff", U.S. Army Historical Division Study MS# P-041d, (Washington, D.C.: Office of the Chief of Military History), 1952, p.6. Halder served as Chief of the Army General Staff from 1938 to 1942.
- [23] Helmut Kleikamp, "Personnel Office", p.12.
- [24] Hansgeorg Model, Der deutsche Generalstabsoffizier. Frankfurt, FRG: Bernard & Graefe Verlag, 1968, p.111.
- [25] Heinz Guderian and Kurt Zeitzler, "Comments on P-041a-P-041hh", U.S. Army Historical Division Study MS# P-04111, (Washington, D.C.: Office of the Chief of Military History), 1953, p.2. Guderian served as a corps, panzer group, and panzer army commander before heading the Inspectorate for Armored Troops. He served as Chief of the Army General Staff in 1944 and 1945. Zeitzler served as Chief of Staff for the 1st Panzer Army, Chief of Staff for Army Group D, and as Chief of the Army General Staff from 1942 to 1944.
- [26] Hasso von Manteuffel, "Fast Mobile and Armored Troops", U.S. Army Historical Division Study MS# B-036, (Washington, D.C.: Office of the Chief of Military History), 1945, pp.3,10,19. Von Manteuffel commanded the 7th Panzer Division and Panzer-grenadier Division Gross Deutschland. During the last year of the war, he commanded the 5th and 3rd Panzer Armies.

[27] Burkhart Mueller-Hillebrand, Das Heer 1933-1945. Band I-III. Frankfurt, FRG: E.S. Mittler & Sohn, 1969, Vol 2, pp.110-III; Vol 3, pp.122,155. Mueller- Hillebrand served as the Chief of Staff for the XXXXVI Panzer Corps, and the 3rd Panzer Army.

[28] Georg Tessin, Verbaende und Truppen der deutschen Wehrmacht und Waffen-SS im Zweiten Weltkrieg 1939-1945 (Band I-XIV). Osnabrueck, FRG: Biblio Verlag, 1979, Bd 1, pp.17-19.

[29] Burkhart Mueller-Hillebrand, Das Heer. Vol 3, p.211:337.

[30] Ibid., p.211:27.

[31] Ibid., p.211:70.

[32] Wolf Keilig. Die Generale des Heeres. Friedberg, FRG: Podzun-Pallas- Verlag, 1983. Durations of command were determined after reviewing biographies of each general officer killed in action or died of wounds.

[33] R. James Bender, and Richard D. Law, Uniforms, Organization, and History of the Afrikakorps. San Jose: R. James Bender, 1973, pp.74,84.

[34] William B. Breuer, Hitler's Fortress Cherbourg. New York: Stein & Day, 1984, p.164.

[35] Max Hastings, Overlord, D-Day and the Battle for Normandy. New York: Simon and Schuster, 1984, pp.173-174.

[36] Werner Haupt, Das war Kurland. Bad Nauheim, FRG: Podzun Verlag, 1987, p.170.

[37] Microfilm. LII Armeekorps, Ia, "Kriegstagebuch", 20.11.41, National Archives Microfilm Publication T-314, Roll 1276, Washington, D.C.: The National Archives and Records Service, General Services Administration, 1970, Frame 510.

[38] "Die Gebirgstruppe". Muenchen, FRG: Geschaeftsstelle des Kameradenkreises der Gebirgstruppe e.V, Heft 2-4, 1969, p.39.

[39] Gerd Niepold, Battle for White Russia. Translated by Richard Simkin. London: Brassey's Defence Publishers. 1987, p.142.

[40] Microfilm. L Armeekorps, Ia, "Kriegstagebuch", 24.9.44, National Archives Microfilm Publication T-314, Roll 1249, Washington, D.C.: The National Archives and Records Service, General Services Administration, 1970, Frame 707.

[41] Microfilm. XXXXVI Panzerkorps, Ia, "Kriegstagebuch", 2.8.43, National Archives Microfilm Publication T-314, Roll 1086, Washington, D.C.: The National Archives and Records Service, General Services Administration, 1970, Frame 533.

During the first part of the war Soviet ground-attack aircraft concentrated on German motorized columns, with attacking units often consisting of two pair of aircraft. At this time Soviet fighter planes were mainly involved against the German Luftwaffe. Attacks were initially carried out from altitudes of 150-300 meters, but this was increased in 1942 to 800-1200 meters which improved accuracy. During the mid-war period Soviet ground attack techniques evolved further. Targets were expanded from the earlier emphasis on enemy tactical columns to now include disruption of rail and highway communications. Additionally, ground-attack aircraft were given "free hunting" missions based on defined geographic regions. One pair of aircraft would be given an assigned area but allowed to select their own targets and methods of attack. The official history of the Soviet Airforce in World War II makes no claim that Soviet air units killed any German general officers. This would seem to indicate that none of the attacks which occurred were specifically planned or the results known to the Soviet command. Ray Wagner, The Soviet Air Force in World War II. Translated by Leland Fetzer. New York: Doubleday & Company, 1973, pp.120,121, and 208.

[42] Richard Brett-Smith, Generals, p.30.

[43] Microfilm. 39 Infanterie Division, Ia, "Kriegstagebuch", 14.5.43, National Archives Microfilm Publication T-315, Roll 907, Washington, D.C.: The National Archives and Records Service, General Services Administration, 1970, Frame 623.

[44] Microfilm. 50 Infanterie Division, Ia, "Kriegstagebuch", 26.6.43, National Archives Microfilm Publication T-315, Roll 948, Washington, D.C.: The National Archives and Records Service, General Services Administration, 1970, Frame 782.

[45] Paul Carell, The Foxes of the Desert. New York: E.P. Dutton, 1961, p.289.

[46] R. James Bender, and Warren W. Odegard, Uniforms, Organization and History of the Panzertruppe. San Jose: R. James Bender, 1980, p.92.

[47] Microfilm. 174 Reserve Infanterie Division, Ia, "Kriegstagebuch", 26.8.43, National Archives Microfilm Publication T-315, Roll 1536, Washington, D.C.: The National Archives and Records Service, General Services Administration, 1970, Frame 27.

[48] August Schmidt, Geschichte der 10. Division. Bad Nauheim, FRG: Podzun-Pallas-Verlag, 1963, p.256.

- [49] Werner Haupt, Italien Kriegsschauplatz 1943 - 1945. Stuttgart, FRG: Motorbuch Verlag, 1977, p.200.
- [50] R. James Bender, and Richard D. Law, Afrikakorps. p.62.
- [51] Paul Carell, Foxes. p.91.
- [52] R. James Bender, and Richard D. Law, Afrikakorps. p.67.
- [53] Ernst Rebentisch, Zum Kaukasus und zu den Tauern, Die Geschichte der 23. Panzer-Division, 1941-1945. Forchheim, FRG: Sperl, 1982, p.87.
- [54] Hasso von Manteuffel, Die 7. Panzer-Division im Zweiten Weltkrieg. Friedberg, FRG: Podzun-Pallas-Verlag, 1986, pp.390-391.
- [55] Microfilm. 129 Infanterie Division, Ia, "Kriegstagebuch", 22.8.42, National Archives Microfilm Publication T-315, Roll 1376, Washington, D.C.: The National Archives and Records Service, General Services Administration, 1970, Frame 169.
- [56] John A. English, A Perspective on Infantry. New York: Praeger, 1981, pp.121,127, and 128.
- [57] Microfilm. 61 Infanterie Division, Ia, "Kriegstagebuch", 7.4.42, National Archives Microfilm Publication T-315, Roll 1016, Washington, D.C.: The National Archives and Records Service, General Services Administration, 1970, Frame 123.
- [58] Paul Carell, Scorched Earth. London: George G. Harrap & Co., 1970, p.87.
- [59] Roland Kaltenegger, Gebirgssoldaten unter dem Zeichen des "Enzian", Schicksalsweg und Kampf der 4. Gebirgs-Division, 1940-1945. Graz, Austria: Leopold Stocker Verlag, 1983, p.258.
- [60] Paul Carell, Scorched Earth. p.476.
- [61] Werner Conze, Die Geschichte der 291 Infanterie-Division, 1940-1945. Bad Nauheim, FRG: Hans Henning Verlag, 1953, p.79.
- [62] R. James Bender, and Richard D. Law, Afrikakorps. p.62.
- [63] Gerhard Graser, Zwischen Kattegat und Kaukasus, Weg und Kaempfe der 198. Infanterie-Division 1939-1945. Tuebingen, FRG: Traditionsverband der ehemaligen 198. Infanterie-Division, 1961, pp.184-185.
- [64] Max Hastings, Overlord. p.84.

[65] Letter received by the author from Dr. Dermot Bradley 7 October 1988. Dr. Bradley, a noted German Army historian and author of the book Taetigkeitsbericht des Chefs des Heerespersonalamtes General der Infanterie Rudolf Schmundt, stated that in most cases German generals took over divisions or corps without having attended such courses. He additionally interviewed GL Hellmuth Reymann, former commander of the 212th Infantry and 11th Infantry Divisions, who did attend this course from 3 January to 28 January 1945 but did not recall any instruction concerning general officer safety or battlefield lethality.

[66] J.F.C. Fuller, Generalship Its Diseases and Their Cure: A Study of the Personal Factor in Command. Harrisburg, Pa.: Military Service Publishing Co., 1936, p.21

[67] FM 100-5, Operations, pp.13-14.

[68] U.S. Army, FM 22-103, Leadership and Command at Senior Levels. pp.22 and 44.

[69] Army Regulation 672-5-1, Military Awards (12 April 1984) gives the following criteria for these awards: (Chapter 13, para 2-7, p.12)

"The Medal of Honor is awarded by the President in the name of Congress to a person who, while a member of the Army, distinguishes himself conspicuously by gallantry and intrepidity at the risk of his life above and beyond the call of duty...The deed performed must have been one of personal bravery or self-sacrifice so conspicuous as to clearly distinguish the individual above his comrades and must have involved risk of life."

"The Distinguished Service Cross is awarded to a person who, while serving in any capacity with the Army, distinguishes himself by extraordinary heroism not justifying the award of a Medal of Honor...The act or acts of heroism must have been so notable and have involved risk of life so extraordinary as to set the individual apart from his comrades."

"The Silver Star is awarded to a person who, while serving in any capacity with the Army, is cited for gallantry in action...the required gallantry, while a lesser degree than required for the award of a Medal of Honor or Distinguished Service Cross, must nevertheless have been performed with marked distinction."

"The Purple Heart is awarded...to any member of an armed force...[who] has been wounded, or killed, or who has died...after being wounded in any action against an enemy of the United States..."

[70] Department of the Army Pamphlet 360-10 (21 February 1986), General Officer Biographies, Washington, D.C.: 1986, multiple pages.

[71] U.S. Army Command and General Staff College School for Professional Development Division Commander/Assistant Division Commander Pre-Command Course. Fort Leavenworth, Kansas. Program of Instruction 1A-F4, 29 July 1988.

[72] Discussion with NTC FORSCOM Leaders Orientation briefer, Fort Irwin, California, 21 September 1988.

[73] U.S. Army, FM 100-2-1, The Soviet Army, Operations and Tactics. Headquarters, Department of the Army, Washington, D.C. 1984, pp. 9-7, 9-19.

[74] Defense Intelligence Agency, Soviet Front Fire Support, DDB-1130-8-82. Defense Intelligence Agency, Washington, D.C. 1982, p.83.

[75] U.S. Army, FM 100-2-3, The Soviet Army, Troops, Organization, and Equipment. Headquarters, Department of the Army, Washington, D.C. 1984, p.4-67.

[76] Ibid., p.4-130.

[77] U.S. Army, FM 100-2-1. p.12-1.

[78] Ibid., pp.12-6, 12-7.

[79] Ibid., pp.12-9, 12-10.

[80] U.S. Army, FM 100-2-2, The Soviet Army, Specialized Warfare. Headquarters, Department of the Army, Washington, D.C. 1984, pp.2-2, 5-1, 5-2, 5-3, 5-4.

[81] Martin van Creveld, Fighting Power, p. 29.

BIBLIOGRAPHY

BOOKS

- Angolia, John R. For Fuehrer and Fatherland; Military Awards of the Third Reich (Volume 1-2). San Jose: R. James Bender, 1976.
- _____. On the Field of Honor, A History of the Knight's Cross Bearers (Volume 1-2). San Jose: R. James Bender, 1980.
- Benary, Albert. Die Berliner Baeren-Division, Geschichte der 257. Infanterie-Division 1939-1945. Bad Nauheim, FRG: Hans-Henning Podzun Verlag, 1955.
- Bender, R. James and Law, Richard D. Uniforms, Organization, and History of the Afrikakorps. San Jose: R. James Bender, 1973.
- Bender, R. James. and Odegard, Warren W. Uniforms, Organization and History of the Panzertruppe. San Jose: R. James Bender, 1980.
- Bradley, Dermot and Schulze-Kossens, Richard. Taetigkeitsbericht des Chefs des Heerespersonalamtes General der Infanterie Rudolf Schmundt: 1.10.42-29.10.44. Osnabrueck, FRG.: Biblio Verlag, 1984.
- Brett-Smith, Richard. Hitler's Generals. San Rafael, California: Presidio Press, 1977.
- Breuer, William B. Hitler's Fortress Cherbourg. New York: Stein & Day, 1984.
- Carell, Paul. The Foxes of the Desert. New York: E.P. Dutton, 1961.
- _____. Hitler Moves East. Boston: Little, Brown and Company, 1964.
- _____. Scorched Earth. London: George G. Harrap & Co., 1970.
- Conze, Werner. Die Geschichte der 291. Infanterie-Division, 1940-1945. Bad Nauheim, FRG: Hans Henning Verlag, 1953.
- Craig, William. Enemy at the Gates. New York: E.P. Dutton, 1973.
- Crevelld, Martin van. Command in War. Cambridge, Massachusetts: Harvard University Press, 1985.
- _____. Fighting Power, German Military Performance, 1914-1945. Potomac, Maryland: C&L Defense Consultants, 1980.
- Downing, David. The Devil's Virtuosos: German Generals at War 1940-5. New York: St. Martin's Press, 1977.
- English, John A. A Perspective on Infantry. New York: Praeger 1981.

- Fellgiebel, Walter-Peer. Die Traeger des Ritterkreuzes des Eisernen Kreuzes, 1939-1945. Friedberg, FRG: Podzun-Pallas Verlag, 1986.
- Folttmann, Josef and Moeller-Witten, Hanns. Opfergang der Generale. Berlin: Bernard & Graefe, 1959.
- Fuller, J.F.C. Generalship Its Diseases and Their Cure: A Study of the Personal Factor in Command. Harrisburg, Pa.: Military Service Publishing Co., 1936.
- Graser, Gerhard. Zwischen Kattegat und Kaukasus, Weg und Kaempfe der 198. Infanterie-Division 1939-1945. Tuebingen, FRG: Traditionsverband der ehemaligen 198. Infanterie-Division, 1961.
- Hastings, Max. Overlord, D-Day and the Battle for Normandy. New York: Simon and Schuster, 1984.
- Haupt, Werner. Herresgruppe Nord. Bad Nauheim, FRG: Podzun Verlag, 1966.
- _____. Das war Kurland. Bad Nauheim, FRG: Podzun Verlag, 1987.
- _____. Italien Kriegsschauplatz 1943 - 1945. Stuttgart, FRG: Motorbuch Verlag, 1977.
- Hinze, Rolf. Der Zusammenbruch der Heeresgruppe Mitte im Osten 1944. Stuttgart, FRG: Motorbuch Verlag, 1980.
- Jomini, Antoine Henri. The Art of War. Westport, Connecticut: Greenwood Press, 1970.
- Kaltenegger, Roland. Gebirgssoldaten unter dem Zeichen des "Enzian", Schicksalsweg und Kampf der 4. Gebirgs-Division, 1940-1945. Graz, Austria: Leopold Stocker Verlag, 1983.
- Keilig, Wolf. Das Deutsche Heer 1939-1945 (Band I-III). Bad Nauheim, FRG: Podzun-Verlag, 1956.
- _____. Die Generale des Heeres. Friedberg, FRG: Podzun-Pallas-Verlag, 1983.
- _____. Rangliste des Deutschen Heeres 1944/45. Friedberg, FRG: Podzun-Pallas-Verlag, 1979.
- Lenfeld, Erwin and Thomas, Franz. Die Eichenlaubtraeger 1940-1945. Wiener Neustadt, Oesterreich: Weilburg Verlag, 1982.
- Lewis, S.J. Forgotten Legions. New York: Praeger, 1985.
- Lucas, James. Alpine Elite - German Mountain Troops of World War II. London: Jane's, 1980.
- von Manteuffel, Hasso. Die 7. Panzer-Division im Zweiten Weltkrieg. Friedberg, FRG: Podzun-Pallas-Verlag, 1986.

- Mehner, Kurt., et al., Editor. Die geheimen Tagesberichte der Deutschen Wehrmachtfuehrung im Zweiten Weltkrieg: 1939-1945. (Band 8-12). Osnabrueck, FRG: Biblio Verlag, 1985.
- Meyer-Detring, Wilhelm. Die 137. Infanteriedivision. Patzenkirchen, Austria: Kameradschaft der Bergmann-Division, 1962.
- Model, Hansgeorg. Der deutsche Generalstabsoffizier. Frankfurt, FRG: Bernard & Graefe Verlag, 1968.
- Mueller-Hillebrand, Burkhardt. Das Heer 1933-1945. Band I-III. Frankfurt, FRG: E.S. Mittler & Sohn, 1969.
- Niebold, Gerd. Battle for White Russia. Translated by Richard Simkin. London: Brassey's Defence Publishers. 1987.
- Ose, Dieter. Entscheidung im Westen 1944. Stuttgart, FRG: Deutsche Verlags-Anstalt, 1982.
- Pohlmann, Hartwig. Geschichte der 96. Infanterie-Division 1939-1945. Bad Nauheim, FRG: Hans-Henning Podzun Verlag, 1959.
- Rangliste des Deutschen Reichsheers (nach dem Stande 1. April 1924). Berlin: Mittler & Sohn, 1924.
- Rangliste des Deutschen Reichsheers (nach dem Stande 1. May 1929). Berlin: Mittler & Sohn, 1929.
- Rebentisch, Ernst. Zum Kaukasus und zu den Tauern, Die Geschichte der 23. Panzer-Division, 1941-1945. Forcheim, FRG: Sperl, 1982.
- Scheibert, Horst. Die Traeger des Deutschen Kreuzes in Gold (Band I, Das Heer). Friedberg, FRG: Podzun-Pallas-Verlag, 1983.
- Schimak, Anton, Lamprecht, Karl, und Dettmer, Friedrich. Die 44. Infanterie Division. Wien, Austria: Verlag Austria Press, 1968.
- Schmidt, August. Geschichte der 10. Division. Bad Nauheim, FRG: Podzun-Pallas-Verlag, 1963.
- Schramm, Percy E., et al., Editor. Kriegstagebuch des Oberkommandos der Wehrmacht (Wehrmachtfuehrungsstab) (Band I-VIII). Muenchen, FRG: Bernard & Graefe Verlag, 1982.
- Seemen, Gerhard von. Die Ritterkreuztraeger. Friedberg, FRG: Podzun-Verlag, 1976.
- Senger und Etterlin, F.M. von. Die 24. Panzer-Division. Friedberg, FRG: Podzun-Pallas-Verlag, 1986.
- Stoves, Rolf. Die 22. Panzer-Division, 25. Panzer-Division 27. Panzer-Division und die 233. Reserve Panzer-Division. Friedberg, FRG: Podzun-Pallas-Verlag, 1985.

- Taylor, Telford. The March of Conquest: The German Victories in Western Europe, 1940. New York: Simon and Schuster, 1958.
- Tessin, Georg. Verbaende und Truppen der deutschen Wehrmacht und Waffen-SS im Zweiten Weltkrieg 1939-1945 (Band I-XIV). Osnabrueck, FRG: Biblio Verlag, 1979.
- Thomas, Franz and Wegmann Guenter, Die Ritterkreuztraeger der Deutschen Wehrmacht 1939-1945. Teil I, II, III. Osnabrueck, FRG: Biblio Verlag, 1987.
- Tiemann, Reinhard. Geschichte der 83. Infanterie-Division. Friedberg, FRG: Podzun-Pallas-Verlag, 1986.
- Truppenfuehrung. Berlin: E.S.Mittler & Sohn, 1936.
- Vetter, Fritz. Die 78. Infanterie- und Sturm-Division, 1938-1945. Friedberg, FRG: Podzun-Pallas-Verlag, 1981.
- Wagner, Ray, ed. The Soviet Air Force in World War II. Translated by Leland Fetzer. New York: Doubleday & Company, 1973.

PERIODICALS

- Die Gebirgstruppe. Muenchen, FRG: Geschaeftsstelle des Kameradenkreises der Gebirgstruppe e.V, Heft 3, 1969.

GOVERNMENT DOCUMENTS

- Blumentritt, Guenther. "The German Armies of 1914 and 1939". U.S. Army Historical Division Study MS# B-296. Translated by M. Otto. Washington, D.C.: Office of the Chief of Military History, 1947.
- Claer, Bernhard von. "Generals of the Third Reich". U.S. Army Historical Division Study MS# B-513. Washington, D.C.: Office of the Chief of Military History, 1946.
- Defense Intelligence Agency. Soviet Front Fire Support. Defense Intelligence Agency, Washington, D.C., 1982.
- Guderian, Heinz and Zeitzler, Kurt. "Comments on P-041a-P-041hh". U.S. Army Historical Division Study MS# P-04111. Translated by J.B. Robinson. Washington, D.C.: Office of the Chief of Military History, 1953.
- Guides to German Records Microfilmed at Alexandria, Virginia. Nos 46, 55, 58, 59, 60, 61, 62, 64. Washington, D.C.: The National Archives and Records Service, General Services Administration, 1970.

- Halder, Franz. "Control of the German Army General Staff". U.S. Army Historical Division Study MS# P-04ld. Translated by H.F. Baerwaldt. Washington, D.C.: Office of the Chief of Military History, 1952.
- Kleikamp, Helmut. "The Army Personnel Office". U.S. Army Historical Division Study MS# P-04lhh. Translated by H.Heitman. Washington, D.C.: Office of the Chief of Military History, 1952.
- Kleikamp, Helmut. "German Army High Command: The Central Branch of the Army General Staff". U.S. Army Historical Division Study MS# P-04lx. Translated by v. Boetticher. Washington, D.C.: Office of the Chief of Military History, 1952.
- Manteuffel, Hasso von. "Fast Mobile and Armored Troops". U.S. Army Historical Division Study MS# B-036. Translated by Mysing. Washington, D.C.: Office of the Chief of Military History, 1945.
- Microfilm. XXXXVI Panzerkorps, Ia, "Kriegstagebuch", 2.8.43, National Archives Microfilm Publication T-314, Roll 1086, Washington, D.C.: The National Archives and Records Service, General Services Administration, 1970.
- Microfilm. L Armeekorps, Ia, "Kriegstagebuch", 24.9.44, National Archives Microfilm Publication T-314, Roll 1249, Washington, D.C.: The National Archives and Records Service, General Services Administration, 1970.
- Microfilm. LI Armeekorps, Ia, "Kriegstagebuch", 20.11.41, National Archives Microfilm Publication T-314, Roll 1276, Washington, D.C.: The National Archives and Records Service, General Services Administration, 1970.
- Microfilm. 39 Infanterie Division, Ia, "Kriegstagebuch", 14.5.43, National Archives Microfilm Publication T-315, Roll 907, Washington, D.C.: The National Archives and Records Service, General Services Administration, 1970.
- Microfilm. 50 Infanterie Division, Ia, "Kriegstagebuch", 26.6.43, National Archives Microfilm Publication T-315, Roll 948, Washington, D.C.: The National Archives and Records Service, General Services Administration, 1970.
- Microfilm. 61 Infanterie Division, Ia, "Kriegstagebuch", 7.4.42, National Archives Microfilm Publication T-315, Roll 1016, Washington, D.C.: The National Archives and Records Service, General Services Administration, 1970.
- Microfilm. 129 Infanterie Division, Ia, "Kriegstagebuch", 22.8.42, National Archives Microfilm Publication T-315, Roll 1376, Washington, D.C.: The National Archives and Records Service, General Services Administration, 1970.

Microfilm. 174 Reserve Infanterie Division, Ia, "Kriegstagebuch", 26.8.43, National Archives Microfilm Publication T-315, Roll 1536, Washington, D.C.: The National Archives and Records Service, General Services Administration, 1970.

Richmond, Melvin E. "Communist Insurgencies and the Relevance of the Concepts of Center of Gravity and Decisive Points." School of Advanced Military Studies Monograph, U.S. Army Command and General Staff College, Fort Leavenworth, Kansas, 1988.

U.S. Army, Regulation 672-5-1 Military Awards. Headquarters, Department of the Army, Washington, D.C., 1987.

U.S. Army, FM 22-103, Leadership and Command at Senior Levels. Headquarters, Department of the Army, Washington, D.C., 1987.

U.S. Army, FM 100-2-1, The Soviet Army, Operations and Tactics. Headquarters, Department of the Army, Washington, D.C., 1984.

U.S. Army, FM 100-2-2, The Soviet Army, Specialized Warfare. Headquarters, Department of the Army, Washington, D.C., 1984.

U.S. Army, FM 100-2-3, The Soviet Army, Troops, Organization, and Equipment. Department of the Army, Washington, D.C., 1984.

U.S. Army, FM 100-5, Operations. Headquarters, Department of the Army, Washington, D.C., 1987.

U.S. Army, DA Pamphlet 360-10, General Officer Biographies. Headquarters, Department of the Army, Washington, D.C., 1986.

PRIVATE CORRESPONDENCE

Letter from Dr. Dermot Bradley. Muenster, FRG, 7 October 1988.